

References

Given the nature of the course, readings will be updated every year.

1. Centre for Budget and Governance Accountability. Recent reports.
2. Chakraborty, P. (2015). Intergovernmental fiscal transfers in India: Emerging trends and realities. In P. Patnaik (ed.): *Macroeconomics*. Oxford University Press.
3. Ministry of Finance. Economic and social classification of the budget.
4. Ministry of Finance. Economic survey (latest).
5. Ministry of Finance. Finance commission report (latest).
6. Ministry of Finance. Union budget.
7. Reddy, Y. (2015). Continuity, change and the way forward: The fourteenth finance commission. *Economic and Political Weekly*, 50(21), 27-36.

Teaching Learning Process

Lectures and tutorials

Assessment Methods

Internal assessment and final examination as per CBCS rules

Keywords

Economic survey, union budget, government policy

Research Methodology (PS41)

Skill Enhancement Elective Courses (SEC) Credit: 4

Course Objective

This course is designed to provide students skills for collecting and analysing data to answer real world problems. It will cover modes of data collection, data cleaning and data representation.

Course Learning Outcomes

The student will develop an understanding of how commonly available data is collected and analyzed. This would help in the interpretation of secondary data and in the management of small primary surveys.

Unit 1

Data Types and sources: Qualitative and quantitative data, measurement and scales; overview of some secondary data sources

Unit 2

Questionnaire design: Measurement and scales, ordering of questions, coding responses

Unit 3

Sampling techniques: Simple random sampling, stratification, sequential sampling; Size and cost trade-offs

Unit 4

Processing of survey data: Data cleaning, checking for consistency

Unit 5

Analysing data: Generating sample statistics and representing them in an easily comprehensible manner

Unit 6

Ethics and Scientific Integrity: Respecting respondent privacy, ethical standards of conduct

References

1. Cochran, W. (2008). *Sampling techniques, 3rd ed.* Wiley.
2. Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., Tourangeau, R. (2009). *Survey Methodology.* Wiley.
3. Kumar, R. (2014). *Research methodology: A step by step guide for beginners, 4th ed.* Sage Publications.

Teaching Learning Process

Combination of labs and lectures

Assessment Methods

Assessment will be based on lab tests and projects.

Keywords

Data, sampling, surveys, data analysis, ethics

Data Analysis (PS51)

Skill Enhancement Elective Courses (SEC) Credit: 4

Course Objective

The students will be instructed on the use of spreadsheet and statistical software to analyse data. Software used for the course will vary based on what is available. Open access software such as R will be encouraged.

Course Learning Outcomes

Students will learn to input, visually represent and analyse data.

Unit 1

Introduction to available software and how it deals with data

Unit 2

Data cleaning: checking for outliers, cleaning variable names, consistency checks

Unit 3

Data visualisation: scatter plots, line graphs, box plots and other graphical formats

Unit 4

Calculating and representing summary statistics and lines of best fit

Unit 5

Elements of statistical inference: calculating and plotting confidence intervals; tests of population differences in population statistics

Unit 6

Miscellaneous other topics: elements of writing simple programs for repetitive tasks, etc.

References

1. Levine, D., Stephan, D., Szabat, K. (2017). *Statistics for managers using Microsoft Excel, 8th ed.* Pearson.
2. Tattar, P., Ramaiah, S., Manjunath, B. (2018). *A course in statistics with R.* Wiley.

Teaching Learning Process

Combination of labs and lectures

Assessment Methods

Assessment will be based on lab tests and projects.

Keywords

Data representation, statistical software, estimation